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(54) Title: IMMEDIATE LOTTERY PROCESSING SYSTEM VIA INTERNET AND METHOD THEREFOR

(57) Abstract: An immediate lottery processing system via Internet comprises a lottery issuing system 100 of a lottery issuing institute contracted with an authentication institute and for issuing all kind of immediate lottery tickets on line with their sale and a lottery issuing processing system 300 connected to the lottery issuing system and having the on-line infra for communicating with Public Communication Network such as Internet, cellular phones. A customer uses his personal computer (PC) terminal 50 to be connected to a sale system 200 for enabling the sale of the lottery ticket. The sale system 200 performs the authentication processes based on a system program and notifies the sale of the lottery ticket to the lottery issuing processing system 300. The lottery issuing processing system 300 comprises a plurality of recording mediums for generating data on the lottery sale and a security data on the sale data, constructing a data base such as a purchase, etc. so as to confirm the authentication and then performing the authentication program and processing the issuing, purchasing, prize winning identification, prize receipt, etc. of the immediate lottery ticket in a batch on the Internet or cellular phones.

TITLE OF INVENTION

IMMEDIATE LOTTERY PROCESSING SYSTEM VIA INTERNET AND METHOD THEREFOR

Technical Field

The invention is related to a technology for processing the purchasing, issuing, prize-identification, prize winning of an immediate lottery using Internet or Cellular phones, and particularly, to an immediate lottery processing system via Internet comprising a recording medium for generating security data on the authentication, approval and payment of issuing lots in a higher reliability and a method therefor.

Background Art

A conventional lottery sale method or Internet or cellular phones-based lottery institute failed to make full use of the properties of the Internet but executed the sale of drawn lots for a lottery institute, and also it had a fault in expanding the marketing.

In other words, according to the conventional lottery sale method, a printed lottery containing a prize content used to require for a lottery issuing institute a burden in every respect including costs of the lottery issuing and administrating, the labour force management related thereto, etc. For it, the lowering prize causes the inactivity of the lottery sale, and becomes lack of a profit for customers. Further, the sale dullness may result in that it is distasteful of the customer to purchase the lottery in the off-line due to his potential self-respect.

In these points, it may be very innovative if the lottery meets the consumers= expectation, and the consumers purchase the lottery with the joyful mind and identify/receive the prize in one-stop on an on-line terminal via the public communication network.

A typical prior art is disclosed in Japanese Patent Laid-Open Publication No. H11-102405 entitled AMethod of issuing lottery ticket and converting it into money in computer networks, in which a sales agency outputs an information input

image (S2) to the ticket issuing terminal of a purchaser in response to the lottery purchaser request and the purchaser inputs the number of lotteries to be bought and a means to purchase them, the database processing and settlement processing procedure (S9) is performed in accordance with it, the ticket issuing terminal performs a ticket issuing output (S12) at an external storage medium in a wide area computer network, and a management number is made by a random number that has no relation to a lottery number for preventing forgeries and is recorded on the external storage device and the database

According to the technology, a local lottery-issuing institute manages a computer server of a bank for being entrusted with the lottery issuance and the money converting. The server is connected to a terminal for issuing a lottery ticket via the computer network. The ticket-issuing terminal is connected to the local lottery-issuing institute via an exclusive line or a public line or Internet provider server. The local lottery issuing institute includes a lottery issuing portion for making an issuing information and a lottery number by a random number and issuing the lottery ticket and a data base constituted as a storage portion, which is connected to an authentication institute contracted with the bank for the settlement of the prize.

But, the technology realizes the lottery issuing at the terminal of a purchaser and the prize identification or receipt at once at the same place, but the lottery issuing institute must be provided with a separate storage means in addition to the generating of data for recording the results on the prize winning identification of all issued lottery tickets so as to prevent the forgeries, and the lottery issuing terminal also must including an outer storage medium or recording means. For it, the system for issuing the lottery ticket and converting it into money becomes complex.

Therefore, it is very preferable if all authentication processing is established in advance in the procedures of purchasing the lottery ticket and identifying the prize winning, so that the possibility of forging the lottery ticket is prevented.

In order to resolve these problems, an object of the invention is to providing an immediate lottery processing system via Internet for processing the issuing and

purchasing of the immediate lottery ticket, the identifying and receipt of the winning prize in a batch and a method therefor, thereby promoting the cost and manpower reduction related to the lottery reproduction, the marketing, the winning prize supply, etc.

The other object of the invention is to providing an immediate lottery processing system via Internet comprising a recording medium for generating security data on the authentication, approval and payment of prize winning lots in a higher reliability and a method therefor.

Disclosure of Invention

According to the invention, an immediate lottery processing system via Internet as shown in Fig. 1 comprises a lottery issuing system 100 of a lottery issuing institute contracted with an authentication institute and for issuing all kind of immediate lottery tickets on line with their sale and a lottery issuing processing system 300 connected to the lottery issuing system and having the on-line infra for communicating with Public Communication Network such as Internet, cellular phones. A customer uses his personal computer (PC) terminal 50 to be connected to a sale system 200 for enabling the sale of the lottery ticket. The sale system 200 performs the authentication processes based on a system program and notifies the sale of the lottery ticket to the lottery issuing processing system 300. The lottery issuing processing system 300 comprises a plurality of recording mediums for generating data on the lottery sale and a security data on the sale data, constructing a data base such as a purchase, etc. so as to confirm the authentication and then performing the authentication program and processing the issuing, purchasing, prize winning identification, prize receipt, etc. of the immediate lottery ticket in a batch on the Internet or cellular phones.

Brief Description of Drawings

The invention will be described in detail with reference to the accompanying drawings, in which:

Fig. 1 is a schematically block diagram illustrating a whole configuration of the invention;

Fig. 2 is a schematically block diagram illustrating an immediate lottery processing system of the invention;

Fig. 3 is a detailed block diagram illustrating an immediate lottery processing system of the invention.

Fig. 4 is a flow chart illustrating the operating of an immediate lottery processing system for issuing and selling a lottery ticket and supplying the winning prize;

Fig. 5 is a flow chart illustrating the procedures for generating lottery tickets according to the invention; and,

Fig. 6 is a flow chart illustrating the procedures for drawing the lottery ticket according to the invention.

Best Mode for Carrying Out the Invention

An immediate lottery processing system 1 for processing the issuing, purchasing, prize-winning identification, prize receipt, etc. of an immediate lottery ticket in a batch on the Internet according to the invention and a method therefor will be explained as follows:

As shown in Fig. 2, a lottery-issuing server 10 is made up as the subject of a lottery-issuing institute that manages to issue the lottery tickets, for example banks or government organisms such as the Ministry of culture and sports for issuing Housing lots or Athletic lots. The server 10 comprises a lottery issuing system 100 provided with a settlement apparatus for entrusting a deposit or supplying the winning prize and a lottery-issuing terminal for issuing lottery tickets, which can be connected to another bank or lottery issuing institute, if necessary.

An Internet sale system 200 is also connected to the lottery-issuing institute such as a bank and includes an authentication server 20 for certificating the Internet sale of the lottery ticket. The authentication server 20 is constructed and operated to be connected to a marketing and sale network for enabling a state of art

technology-based Internet goods and services to be provided with.

A lottery issuing processing system 300 comprises a main server (not shown) for processing the security and generating a database for issuing the lottery tickets while constructing a lottery database. The main server is connected to a lottery issuing server 20, which is connected to Public Communication networks for enabling the use of Internet or cellular phones as shown in Fig. 1. The lottery issuing processing system 300 is connected to the authentication server 20 and the customer PC terminal 50 via the Public Communication networks to process the lottery ticket issuing, purchasing, winning prize identification, prize receipt. The lottery issuing processing system 300 also comprise a processing program for recognizing the advertisement and the question confirmation of a customer and then enabling him to purchase the lottery ticket free of charge equivalent to attending the advertisement browsing and answering a predetermined question and data bases 30 and 40 for generating data on the recognized advertisements and questions.

Therefore, as shown in Fig. 3, the lottery issuing processing system 300 comprises a web server 31 to which the customer PC terminals 50 of an unspecified number of the general public are connected. The customers including a first subscriber or existing members are subject to being verified upon the entrance registering. The web server 31 generates a recipient=s public key based on a RSA (Rivest-Shamir-Aldleman) method and applies the public key to a system control portion 32.

The system control portion 32 fetches a recipient=s privacy key corresponding to the public key based on a system control program stored at a ROM, etc. from the lottery issuing server 10 and construct a user data base 70 which includes users= former data. The web server 32 is connected to a settlement system 21 constituted as a part of an authentication server 20 for verifying the Internet sale of the lottery ticket issued at the bank, etc. If the purchase of the immediate lottery ticket is verified, the system control portion 32 identifies the public and privacy keys through the user data base 70 and fetches a lottery data therefrom according to a lottery generating program of a recording medium 90, so

that the lottery ticket is selected as a random number by the recipient=s public key and privacy key according to the Library Random Function.

In other words, the system control portion 32 processes a random number drawing based on a random number drawing program of a recording medium 60 in a manner to fetch a lottery data from a lottery data base 80 and construct a lottery generating data base on a data table 33, so that the customers are allowed to select a lottery ticket, voluntarily, and the selected lottery tickets are stored at a lottery data base 80. The lottery data base 80 contains data that the system control portion 32 identifies the privacy key constructed based on a prize data table 81 and a lottery number table 82 to be decrypted with a prize data and a lottery data to be encrypted for use. The data constructed on the lottery table 33 is selected by the customer and sent to a code-decrypting portion 34. The code decrypting portion 34 decrypts the authentication code based on the privacy key upon the inputting of the recipient=s public key and generates the lottery number. At this time, the system control portion 32 identifies the drawing of the lottery ticket and then controls a drawing-processing portion 35 to notify a processed data to the web server 31, so that the customer confirms the prize winning.

Therefore, a method for issuing an immediate lottery ticket via Internet is as follows:

As shown in Fig. 4, a lottery issuing processing system 300 process the selection of at least one lottery ticket corresponding to all kinds and amount that is desired by the key input of a customer at step 301. Step 301 goes on step 302 to process the authentication according to the inputting of ID and password that are provided from the lottery issuing institute or selected by the customer on an Internet immediate lottery site. If the ID and/or password are wrongly inputted, step 302 goes onto step 303 to process the authentication, again. If the authentication process is finished, the lottery purchase process is performed at step 304. At this time, the lottery issuing processing system 300 generates random numbers of the lottery ticket to allow the customer to select the lottery ticket, voluntarily, and identifies a recipient=s privacy key on a data base constructed by itself to keep its security.

Therefore, the customer can select a desirable group and number of the lottery ticket and purchase the lottery ticket randomly selected by the system. Step 304 goes on to step 305 to perform the identifying process of the purchasing offer item. At this time, a system control server of the lottery issuing processing system 300 constructs a database on the sale of the lottery ticket based on a system program and determines the prize winning and losing contents based on a random number algorithm. Then, the system allows the customer to identify the prize winning content or the drawing result.

If the customer wants additional purchase of the lottery ticket, the additional purchase process is performed at step 306. The system server performs steps 304 and 305 to process the purchasing of the lottery ticket and its identification in turns. After the identification of the purchasing offer content, step 305 goes onto step 307 to process the settlement equivalent to the purchase. In that case, the customer can use a general credit card, an electronic money that enables an advance or deferred payment, a promised account and a settlement means deposited in a bank account that are generally used.

For these series of operations, a system control portion 32 executes the lottery drawing based on a lottery drawing programming and the lottery generating based on a lottery generating programming.

As shown in Figs. 5 and 6, it is judged at step 401 whether the lottery ticket is issued according to the purchase of the customer. At this time, the system control portion 32 identifies the issuing permission or rejection from a settlement system 20 for the purchase authentication of the lottery ticket. If the lottery drawing is not possible, it is judged as the abnormal purchase thereby to terminate the lottery sale. If possible, step 401 proceeds onto step 402 to judge whether an amount of data sufficient to issue the lottery ticket is secured. If it is not possible to sell the lottery ticket, it is judged as the abnormal purchase thereby to stop the sale. If the purchase is possible, step 402 goes onto step 403 to construct a lottery data on a lottery database 80. Then, step 403 goes onto step 404 to fetch a lottery data table from the lottery database 80.

It is judged at step 405 whether the lottery data t table is verified. If not, step 405 moves onto step 406 to select a lottery ticket in the lottery data table using a recipient=s public key. If the lottery data table is verified or the lottery ticket is selected, step 406 goes onto step 407 to give an authentication code to the lottery data table or the lottery ticket using the recipient=s privacy key. The lottery data table or the lottery ticket is decoded with the authentication code at a decrypting portion 34.

On the other hand, at step 410, a number of prizewinners and the lottery data are constructed at the lottery database 80 as a plurality of customers purchase the lottery ticket. Also, the system control portion 32 performs the lottery drawing. Step 410 goes onto step 411 to judge whether the ratio of winning numbers is calculated using the library random function. If the lottery data is constructed based on the ratio of winning numbers calculated, step 411 moves onto step 412 to generate the lottery purchase data. If the lottery data is not constructed and the lottery table is constructed, step 411 jumps onto step 413 to judge whether the lottery data is selected. If not, step 413 goes onto step 414 to generate the lottery table as a lucky number. If the lottery data is selected, step 413 moves onto step 415 to generate data of the prize winning or losing and store the data at the lottery database 80.

Next, step 415 proceeds onto step 416 to identify the codes of the recipient=s public key and privacy key related to the lottery data selected. Step 415 moves onto step 417 to judge whether the lottery purchase is determined. If not, step 417 returns to step 410. If the lottery purchase is identified, step 417 moves onto step 350 to identify the purchase offer contents.

Industrial Applicability

As described above, an immediate lottery processing system performs a first random number process based on the library random function and generates a lottery data to perform a second random number process using its own data base and at least one system programming in order to determine the prize winning or losing, so that the authentication and security of the system is firmly established.

CLAIMS

WHAT IS CLAIMED IS:

1. An immediate lottery processing system via Internet comprising:

a lottery issuing system 100 of a lottery issuing institute contracted with an authentication institute and for issuing all kinds of immediate lottery tickets on line including their sale;

a sale system 200 connected to the lottery issuing system 100 and having the on-line infrastructure to sell the lottery tickets using a PC terminal, cellular phones; and

a lottery issuing processing system 300 including at least one data base for processing the security and authentication identifying based on at least one system programming and for processing the issuing, purchasing, prize winning identification, prize receipt, etc. of the immediate lottery ticket in a batch on Internet.

2. The immediate lottery processing system via Internet as claimed in Claim 1, in which:

the lottery issuing processing system 300 comprises;

a web server 31 connected to Internet to act as an inputting and outputting server for the purchasing and issuing of the lottery ticket.

a system control portion 32 for generating a recipient public key according to the purchase of the lottery, giving a recipient=s privacy key of the system itself corresponding to the public key to generate an authentication key, processing the authentication to the request of the purchase permission and the winning prize payment from an authentication server 20 and constructing a lottery data base using the library random function;

a lottery table 33 containing a lottery data generated according to the control of a lottery drawing programming of the system control portion 32;

a code decrypting portion 34 for decoding the encryption of the lottery table and decrypting the code according to the control of a lottery drawing programming of the system control portion 32;

a prize winning processing portion 35 for identifying the prize winning or losing and verifying the lottery data according to the control of a lottery drawing programming of the system control portion 32;

a lottery data base 80 containing data that the system control portion 32 identifies the privacy key constructed based on a prize data table 81 and a lottery number table 82 to be decrypted with a prize data and a lottery data to be encrypted for use; and

a customer data base 70 memorizing the recipient=s public key and privacy key that the system control portion 32 gets a lottery data to be fetched from the lottery data base 80 according to a lottery generating program of a recording medium 90 so as to process the lottery ticket by random numbers.

3. The immediate lottery processing system via Internet as claimed in Claim 1, in which:

the lottery issuing processing system 300 is connected to at least one authentication server for automatically depositing the supply and receipt of the lottery ticket in an account.

4. The immediate lottery processing system via Internet as claimed in Claim 1, in which:

the lottery issuing processing system 300 processes the entrusting on the settlement, payment and receipt of the lottery ticket to sell the lottery ticket to a person and the free purchase of the lottery ticket equivalent to the browsing of advertisements and the answer of questions.

5. The immediate lottery processing system via Internet as claimed in Claim 1, in which:

the lottery issuing processing system 300 including the Internet sale system 200 for processing the immediate lottery purchasing, the prize winning identification and the winning prize receipt on Internet in a batch.

6. A method for processing an immediate lottery issuing via Internet comprising steps of:

selecting a lottery ticket according to all kinds or amounts of the lottery ticket according to the key input of a PC terminal;

verifying a recipient=s public key provided for an immediate lottery site and/or according to the input of ID and password;

verifying a recipient= public key, again, if the error occurs;

generating random numbers to issue the lottery tickets, fetching the lottery ticket, voluntarily, identifying a recipient=s privacy key from a data base constructed by a system itself to check the security and issuing;

constructing a data base for the lottery tickets that is sold based on the system programming and determining the prize winning or losing based on a random number algorithm to notify the purchasing result to a customer;

performing additional purchasing processes through the random number generating, the lottery fetching, the privacy key identification, the data base constructing and the prizing winning or losing determining;

settling the payment of the lottery ticket through a general credit card, a promised account, the account deposition transferring after the purchasing of the lottery ticket; and

notifying the purchasing result to the customer.

7. The method for processing an immediate lottery issuing via Internet as claimed in Claim

6, in which:

the lottery purchase comprises steps of performing a lottery drawing routine based on a lottery drawing programming and a lottery generating routine based on a

lottery generating programming.

8. The method for processing an immediate lottery issuing via Internet as claimed in Claim 7, in which:

the lottery drawing routine comprises steps of:

judging whether the lottery issuing is requested according to a customer=s offer;

judging an amount of a lottery data to be issued;

constructing a lottery data on a lottery database using the library random function if the purchasing is requested;

fetching the lottery data from the lottery database;

judging whether a lottery data table is verified;

selecting the lottery ticket in the lottery data table by a recipient=s public key, if the lottery data table is not verified; and

giving an authentication code to the lottery data table or the lottery ticket by the privacy key, if the lottery data table is verified or the lottery ticket is selected, and decoding the lottery data table or the lottery ticket with the authentication code at a code decrypting portion.

9. The method for processing an immediate lottery issuing via Internet as claimed in Claim 6, in which:

the lottery generating routine comprises steps of:

judging whether the ratio of winning numbers is calculated using the library random function;

generating lottery-purchasing data if the lottery data is constructed according to the ratio of winning numbers;

judging whether the lottery data is selected;

generating the lottery table already generated as a lucky number, if the

lottery data is not selected;

generating data of the prize winning and losing, if the lottery data is selected;

identifying the codes of the recipient=s public and privacy keys of the lottery data selected; and,

judging whether the lottery purchasing is determined and identifying the purchasing offers contents, if the purchasing is determined.

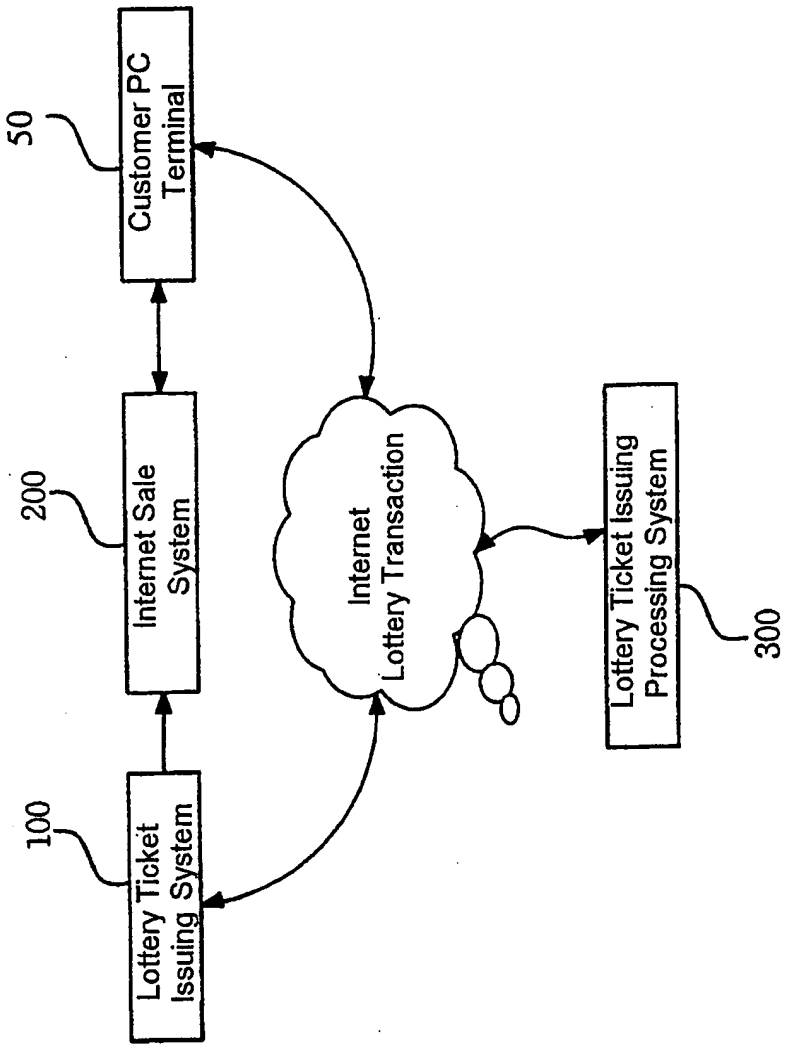
50
Customer PC Terminal
200
Internet Sale System
100
Lottery Ticket Issuing System
Internet Lottery Transaction
Lottery Ticket Issuing Processing System
300

Fig 1

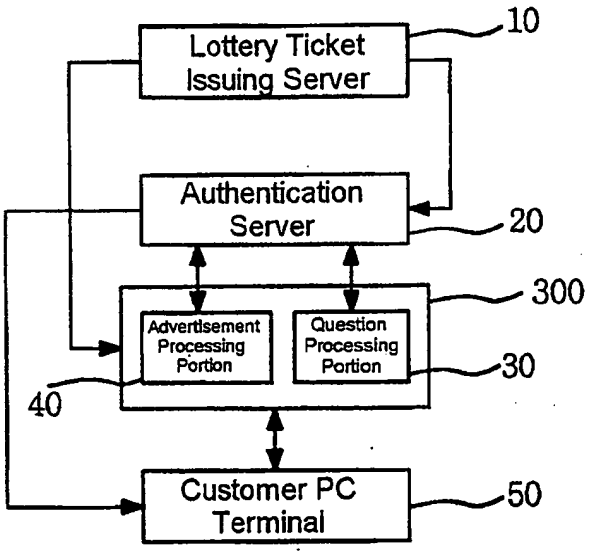
Lottery Ticket Issuing Server
10
Authentication Server
20
300
Advertisement Processing Portion
Question Processing Portion
30
40
Customer PC Terminal
50

Fig 2

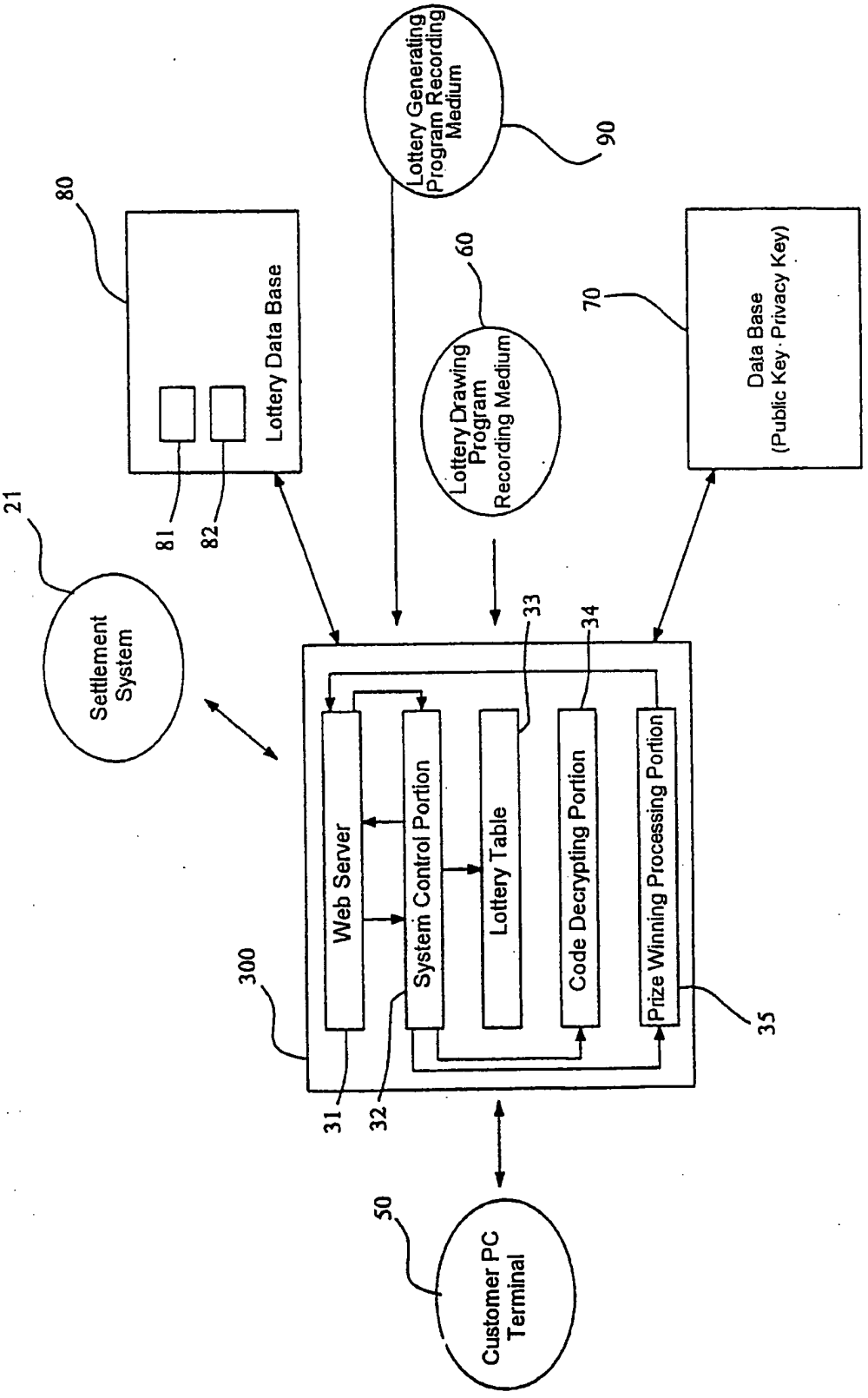
Lottery Generating Program Recording Medium
90
80
Lottery Data Base
81
82
60
Lottery Drawing Program Recording Medium
70
Data Base (Public Key · Privacy Key)
21
Settlement System
33
34
Web Server
System Control Portion
Lottery Table
Code Decrypting Portion
Prize Winning Processing Portion
300
35
31
32
50
Customer PC Terminal

Fig3

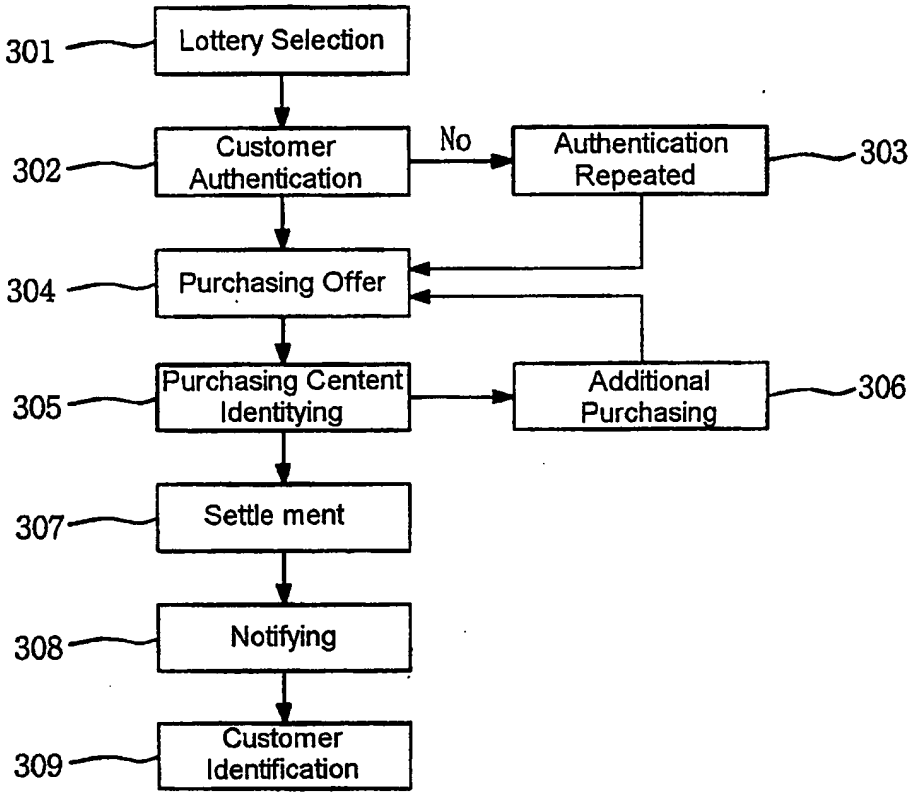
301
Lottery Selection
302
Customer Authentication
No
Authentication Repeated
303
304
Purchasing Offer
305
Purchasing Centent Identitying
Additional Purchasing
306
307
Settle ment
308
Notifying
309
Customer Identification

FIG4

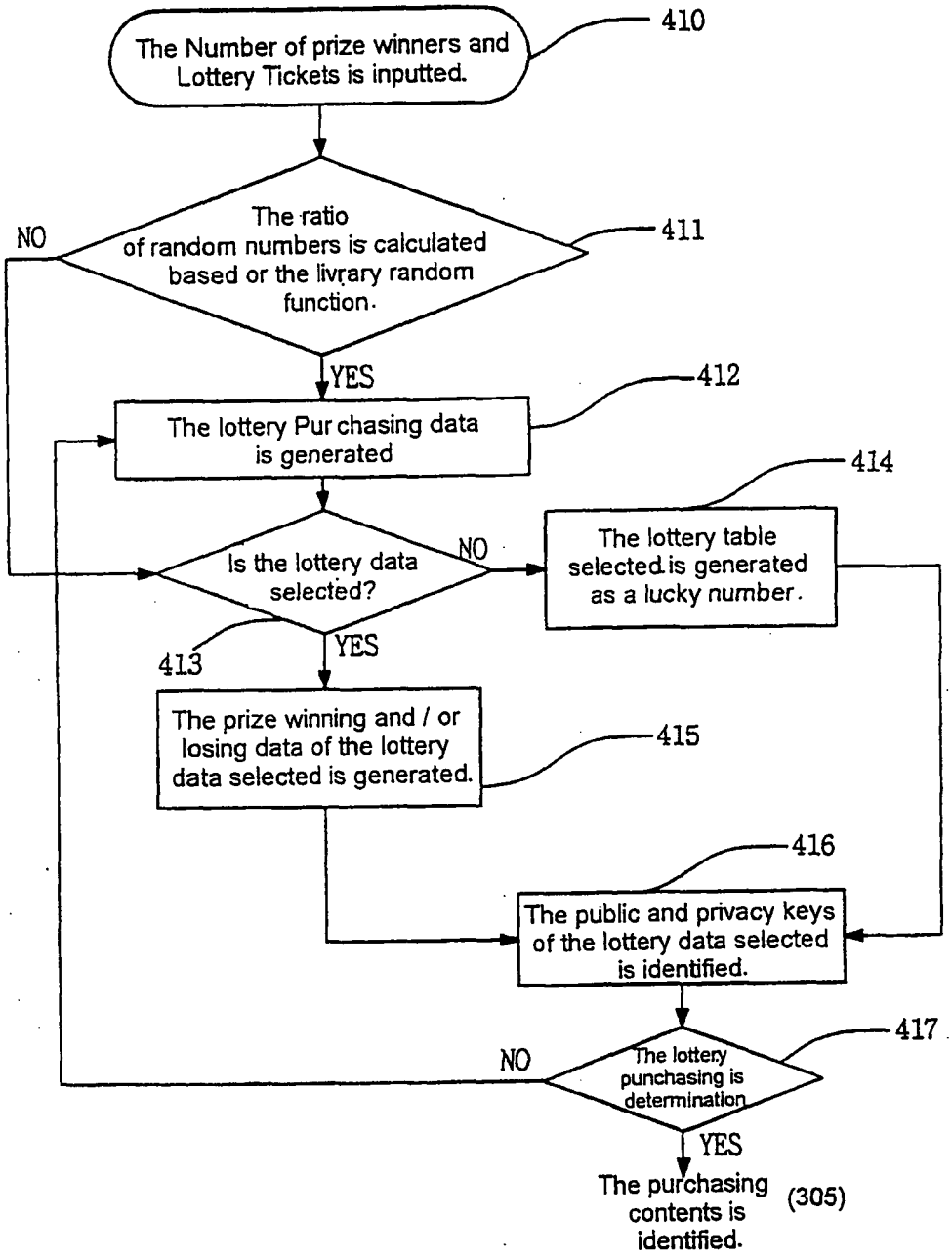
The Number of prize winners and Lottery Tickets is inputted.
410
The ratio of random numbers is calculated based or the livrary random function.
411
NO
YES
412
The lottery Pur chasing data is generated
414
Is the lottery data selected?
NO
The lottery table selected is generated as a lucky number.
413
YES
The prize winning and / or losing data of the lottery data selected is generated.
415
416
The public and privacy keys of the lottery data selected is identified.
417
The lottery punchasing is determination
NO
YES
The purchasing contents is identified.
(305)

Fig5

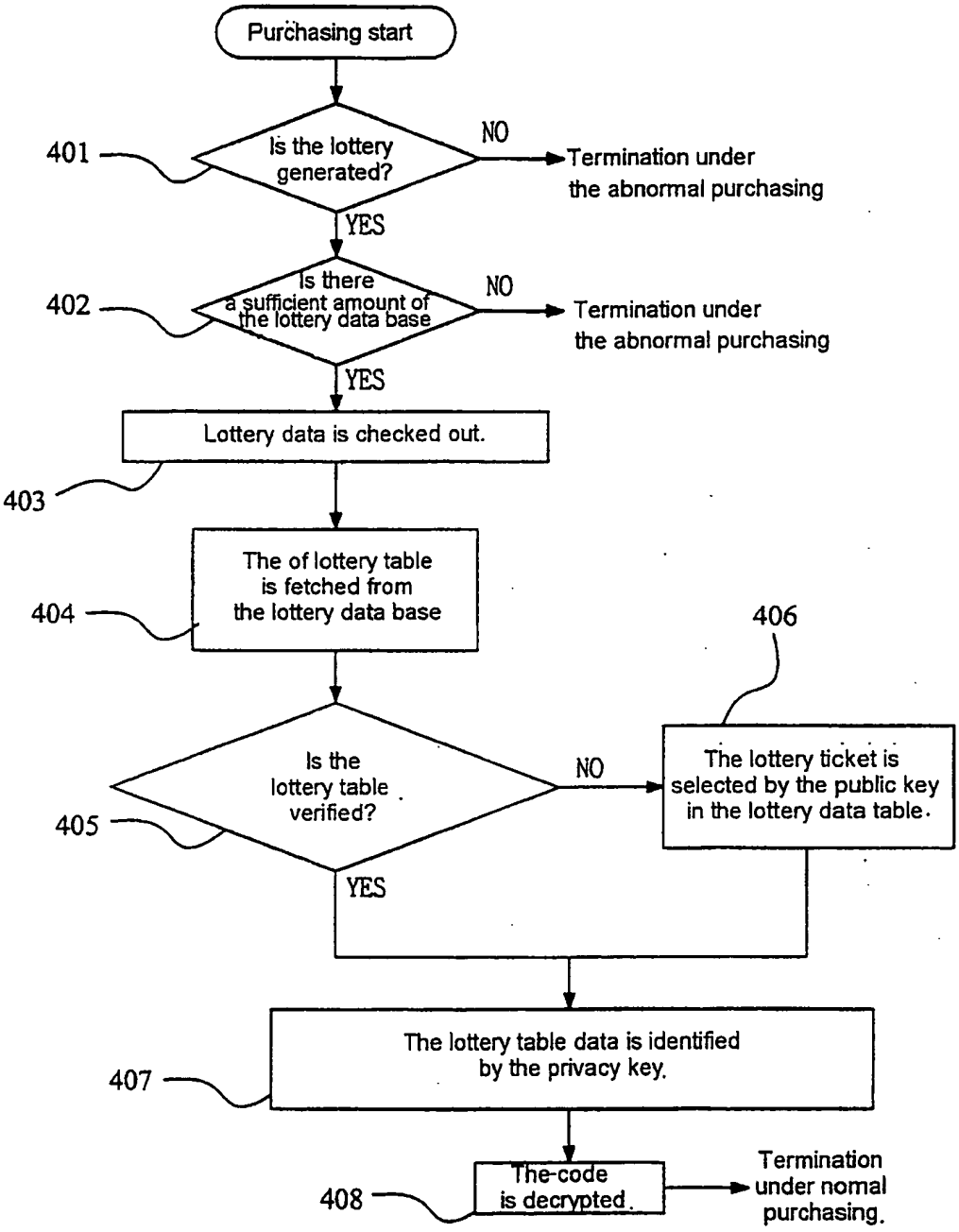
Purchasing start
401
Is the lottery generated?
NO
Termination under the abnormal purchasing
YES
402
Is there a sufficient amount of the lottery data base
NO
Termination under the abnormal purchasing
YES
Lottery data is checked out.
403
The of lottery table is fetched from the lottery data base
404
406
Is the lottery table verified?
405
NO
The lottery ticket is selected by the public key in the lottery data table.
YES
The lottery table data is identified by the privacy key.
407
The code is decrypted.
408
Termination under nomal purchasing.

Fig6